Welcome to The Praxis™ Study Companion

Prepare to Show What You Know

You have gained the knowledge and skills you need for your teaching career. Now you are ready to demonstrate your abilities by taking a Praxis™ test.

Using The Praxis Study Companion is a smart way to prepare for the test so you can do your best on test day. This guide can help keep you on track and make the most efficient use of your study time.

The Study Companion contains practical information and helpful tools, including:

- An overview of the tests
- Specific information on the Praxis test you are taking
- A template study plan
- Practice questions and explanations of correct answers
- Test-taking tips and strategies
- Frequently asked questions
- Links to more detailed information

So where should you start? Begin by reviewing this guide in its entirety and note those sections that you need to revisit. Then you can create your own personalized study plan and schedule based on your individual needs and how much time you have before test day.

Keep in mind that study habits are individual. There are many different ways to successfully prepare for your test. Some people study better on their own, while others prefer a group dynamic. You may have more energy early in the day, but another test taker may concentrate better in the evening. So use this guide to develop the approach that works best for you.

Your teaching career begins with preparation. Good luck!
# Table of Contents

The Praxis™ Study Companion guides you through the 10 steps to success

1. Know What to Expect ........................................................................................................4
   Familiarize yourself with the Praxis tests so you know what to expect

2. Familiarize Yourself with Test Questions ........................................................................5
   Become comfortable with the types of questions you’ll find on the Praxis tests

3. Understand Your Scores ..................................................................................................9
   Understand how tests are scored and how to interpret your test scores

4. Learn About Your Test ....................................................................................................11
   Learn about the specific test you will be taking

5. Determine Your Strategy for Success ...............................................................................20
   Set clear goals and deadlines so your test preparation is focused and efficient

6. Develop Your Study Plan ...............................................................................................23
   Develop a personalized study plan and schedule

7. Review Smart Tips for Success .......................................................................................27
   Follow test-taking tips developed by experts

8. Practice with Sample Test Questions ...........................................................................29
   Answer practice questions and find explanations for correct answers

9. Check on Testing Accommodations ...............................................................................36
   See if you qualify for accommodations that may make it easier to take the Praxis test

10. Do Your Best on Test Day ..............................................................................................37
    Get ready for test day so you will be calm and confident

Appendix: Other Questions You May Have ........................................................................39
1. Know What to Expect

Familiarize yourself with the Praxis tests so you know what to expect

Which test should I take?
Each state or agency that uses the Praxis tests sets its own requirements for which test or tests you must take for the teaching area you wish to pursue.

Before you register for a test, confirm your state or agency’s testing requirements at www.ets.org/praxis/states.

How are the Praxis tests given?
Praxis tests are given in both computer and paper formats. Note: Not all Praxis tests are offered in both formats.

Should I take the computer- or paper-delivered test?
You should take the test in whichever format you are most comfortable. Some test takers prefer taking a paper-and-pencil test, while others are more comfortable on a computer. Please note that not all tests are available in both formats. To help you decide, watch the What to Expect on Test Day video for computer-delivered tests.

If I'm taking more than one Praxis test, do I have to take them all in the same format?
No. You can take each test in the format in which you are most comfortable.

Is there a difference between the subject matter covered on the computer-delivered test and the paper-delivered test?
No. The computer-delivered test and paper-delivered test cover the same content.

Where and when are the Praxis tests offered?
You can select the test center that is most convenient for you. The Praxis tests are administered through an international network of test centers, which includes some universities, high schools, Prometric® Testing Centers, and other locations throughout the world.

Testing schedules depend on whether you are taking computer-delivered tests or paper-delivered tests. See the Praxis Web site for more detailed test registration information at www.ets.org/praxis/register.
2. Familiarize Yourself with Test Questions

Become comfortable with the types of questions you’ll find on the Praxis tests

The Praxis tests include two types of questions — multiple-choice (for which you select your answers from a list of choices) and constructed-response (for which you write a response of your own). You may be familiar with these question formats from taking other standardized tests. If not, familiarize yourself with them so you don’t spend time during the test figuring out how to answer them.

Understanding Multiple-Choice Questions

Many multiple-choice questions begin with the phrase “which of the following.” Take a look at this example:

Which of the following is a flavor made from beans?
(A) Strawberry
(B) Cherry
(C) Vanilla
(D) Mint

How would you answer this question?

All of the answer choices are flavors. Your job is to decide which of the flavors is the one made from beans.

Try following these steps to select the correct answer.

1) Limit your answer to one of the choices given. You may know that chocolate and coffee are also flavors made from beans, but they are not listed. Rather than thinking of other possible answers, focus only on the choices given (“which of the following”).

2) Eliminate incorrect answers. You may know that strawberry and cherry flavors are made from fruit and that mint flavor is made from a plant. That leaves vanilla as the only possible answer.

3) Verify your answer. You can substitute “vanilla” for the phrase “which of the following” and turn the question into this statement: “Vanilla is a flavor made from beans.” This will help you be sure that your answer is correct. If you’re still uncertain, try substituting the other choices to see if they make sense. You may want to use this technique as you answer multiple-choice questions on the practice tests.
Try a more challenging example

The vanilla bean question is pretty straightforward, but you’ll find that more challenging questions have a similar structure. For example:

Entries in outlines are generally arranged according to which of the following relationships of ideas?

(A) Literal and inferential
(B) Concrete and abstract
(C) Linear and recursive
(D) Main and subordinate

You’ll notice that this example also contains the phrase “which of the following.” This phrase helps you determine that your answer will be a “relationship of ideas” from the choices provided. You are supposed to find the choice that describes how entries, or ideas, in outlines are related.

Sometimes it helps to put the question in your own words. Here, you could paraphrase the question in this way: “How are outlines usually organized?” Since the ideas in outlines usually appear as main ideas and subordinate ideas, the answer is (D).

QUICK TIP: Don’t be intimidated by words you may not understand. It might be easy to be thrown by words like “recursive” or “inferential.” Read carefully to understand the question and look for an answer that fits. An outline is something you are probably familiar with and expect to teach to your students. So slow down, and use what you know.

Watch out for multiple-choice questions containing “NOT,” “LEAST,” and “EXCEPT”

This type of question asks you to select the choice that does not fit. You must be very careful because it is easy to forget that you are selecting the negative. This question type is used in situations in which there are several good solutions or ways to approach something, but also a clearly wrong way.

How to approach questions about graphs, tables, or reading passages

When answering questions about graphs, tables, or reading passages, provide only the information that the questions ask for. In the case of a map or graph, you might want to read the questions first, and then look at the map or graph. In the case of a long reading passage, you might want to go ahead and read the passage first, marking places you think are important, and then answer the questions. Again, the important thing is to be sure you answer the questions as they refer to the material presented. So read the questions carefully.

How to approach unfamiliar formats

From time to time, new question formats are developed to find new ways of assessing knowledge. The latest tests may include audio and video components, such as a movie clip or animation, instead of the more traditional map or reading passage. Other tests may allow you to zoom in on details of a graphic or picture. Tests may also include interactive questions that take advantage of technology to assess knowledge and skills. They can assess knowledge more than standard multiple-choice questions can. If you see a format you are not familiar with, read the directions carefully. They always give clear instructions on how you are expected to respond.

For most questions, you will respond by clicking an oval to select a single answer from a list of options. Other questions may ask you to respond in the following ways:
• **Typing in an entry box.** When the answer is a number, you may be asked to enter a numerical answer. Some questions may have more than one place to enter a response.

• **Clicking check boxes.** You may be asked to click check boxes instead of an oval when more than one choice within a set of answers can be selected.

• **Clicking parts of a graphic.** In some questions, you will select your answers by clicking on a location (or locations) on a graphic such as a map or chart, as opposed to choosing your answer from a list.

• **Clicking on sentences.** In questions with reading passages, you may be asked to choose your answers by clicking on a sentence (or sentences) within the reading passage.

• **Dragging and dropping answer choices into targets on the screen.** You may be asked to select answers from a list of options and drag your answers to the appropriate location in a table, paragraph of text or graphic.

• **Selecting options from a drop-down menu.** You may be asked to choose answers by selecting options from a drop-down menu (e.g., to complete a sentence).

Remember that with every question you will get clear instructions on how to respond. See the Praxis Computer-delivered Testing Demonstration on the Praxis website to learn more about Praxis tests and to see examples of some of the types of questions you may encounter.

**QUICK TIP:** Don't make the questions more difficult than they are. Don't read for hidden meanings or tricks. There are no trick questions on Praxis tests. They are intended to be serious, straightforward tests that accurately assess your knowledge.

**Understanding Constructed-Response Questions**

Constructed-response questions require you to demonstrate your knowledge in a subject area by providing in-depth explanations on particular topics. Essay and problem solving are types of constructed-response questions.

For example, an essay question might present you with a topic and ask you to discuss the extent to which you agree or disagree with the opinion stated. You must support your position with specific reasons and examples from your own experience, observations, or reading.

Take a look at a few sample essay topics:

• “Celebrities have a tremendous influence on the young, and for that reason, they have a responsibility to act as role models.”

• “We are constantly bombarded by advertisements—on television and radio, in newspapers and magazines, on highway signs, and the sides of buses. They have become too pervasive. It’s time to put limits on advertising.”

• “Advances in computer technology have made the classroom unnecessary, since students and teachers are able to communicate with one another from computer terminals at home or at work.”

A problem-solving question might ask you to solve a mathematics problem such as the one below and show how you arrived at your solution:

a) In how many different ways can 700 be expressed as the product of two positive integers? Show how you arrived at your answer.

b) Among all pairs of positive integers whose product is 700, which pair has the maximum greatest common divisor? Explain how you arrived at your answer.
Keep these things in mind when you respond to a constructed-response question

1) **Answer the question accurately.** Analyze what each part of the question is asking you to do. If the question asks you to describe or discuss, you should provide more than just a list.

2) **Answer the question completely.** If a question asks you to do three distinct things in your response, you should cover all three things for the best score. Otherwise, no matter how well you write, you will not be awarded full credit.

3) **Answer the question that is asked.** Do not change the question or challenge the basis of the question. You will receive no credit or a low score if you answer another question or if you state, for example, that there is no possible answer.

4) **Give a thorough and detailed response.** You must demonstrate that you have a thorough understanding of the subject matter. However, your response should be straightforward and not filled with unnecessary information.

5) **Reread your response.** Check that you have written what you thought you wrote. Be sure not to leave sentences unfinished or omit clarifying information.

**QUICK TIP:** You may find that it helps to circle each of the details of the question in your test book or take notes on scratch paper so that you don’t miss any of them. Then you’ll be sure to have all the information you need to answer the question.

For tests that have constructed-response questions, more detailed information can be found in “4. Learn About Your Test” on page 11.

**Understanding Computer-Delivered Questions**

Questions on computer-delivered tests are interactive in the sense that you answer by selecting an option or entering text on the screen. If you see a format you are not familiar with, read the directions carefully. The directions always give clear instructions on how you are expected to respond.

Interactive question types may ask you to respond by:

- Typing in an entry box, particularly for a constructed-response question.
- Clicking an oval answer option for a multiple-choice question.
- Clicking on sentences. In questions with reading passages, you may be asked to choose your answer by clicking on a sentence or sentences within the reading passage.

Perhaps the best way to understand computer-delivered questions is to view the Computer-delivered Testing Demonstration on the Praxis Web site to learn how a computer-delivered test works and see examples of some types of questions you may encounter.
3. Understand Your Scores

Understand how tests are scored and how to interpret your test scores

Of course, passing the Praxis test is important to you so you need to understand what your scores mean and what your state requirements are.

What are the score requirements for my state?
States, institutions, and associations that require the tests set their own passing scores. Visit www.ets.org/praxis/states for the most up-to-date information.

If I move to another state, will my new state accept my scores?
The Praxis Series tests are part of a national testing program, meaning that they are required in more than one state for licensure. The advantage of a national program is that if you move to another state that also requires Praxis tests, you can transfer your scores. Each state has specific test requirements and passing scores, which you can find at www.ets.org/praxis/states.

How do I know whether I passed the test?
Your score report will include information on passing scores for the states you identified as recipients of your test results. If you test in a state with automatic score reporting, you will receive passing score information for that state.

A list of states and their passing scores for each test are available online at www.ets.org/praxis/states.

What your Praxis scores mean
You received your score report. Now what does it mean? It’s important to interpret your score report correctly and to know what to do if you have questions about your scores.

Visit http://www.ets.org/s/praxis/pdf/sample_score_report.pdf to see a sample score report. To access Understanding Your Praxis Scores, a document that provides additional information on how to read your score report, visit www.ets.org/praxis/scores/understand.

Put your scores in perspective
Your score report indicates:

• Your score and whether you passed
• The range of possible scores
• The raw points available in each content category
• The range of the middle 50 percent of scores on the test
• Your Recognition of Excellence (ROE) Award status, if applicable (found at www.ets.org/praxis/scores/understand/roe)

If you have taken the same test or other tests in The Praxis Series over the last 10 years, your score report also lists the highest score you earned on each test taken.
Content category scores and score interpretation

On many of the Praxis tests, questions are grouped into content categories. To help you in future study or in preparing to retake the test, your score report shows how many “raw points” you earned in each content category. Compare your “raw points earned” with the maximum points you could have earned (“raw points available”). The greater the difference, the greater the opportunity to improve your score by further study.

Score scale changes

ETS updates Praxis tests on a regular basis to ensure they accurately measure the knowledge and skills that are required for licensure. Updated tests cover the same content as the previous tests. However, scores might be reported on a different scale, so requirements may vary between the new and previous versions. All scores for previous, discontinued tests are valid and reportable for 10 years.

These resources may also help you interpret your scores:

- Understanding Your Praxis Scores (PDF), found at www.ets.org/praxis/scores/understand
- The Praxis Series Passing Scores (PDF), found at www.ets.org/praxis/scores/understand
- State requirements, found at www.ets.org/praxis/states
4. Learn About Your Test

Learn about the specific test you will be taking

Middle School Science (0439)

Test at a Glance

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Middle School Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Code</td>
<td>0439</td>
</tr>
<tr>
<td>Time</td>
<td>2 hours</td>
</tr>
<tr>
<td>Number of Questions</td>
<td>90 multiple-choice questions (Part A); 3 constructed-response questions (Part B)</td>
</tr>
<tr>
<td>Format</td>
<td>90 multiple-choice questions and 3 constructed-response questions</td>
</tr>
<tr>
<td>Weighting</td>
<td>Multiple choice: 75% of total score; Constructed response: 25% of total score</td>
</tr>
<tr>
<td>Test Delivery</td>
<td>Paper delivered</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Content Categories</th>
<th>Approximate Number of Questions</th>
<th>Approximate Percentage of Examination</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Scientific Methodology, Techniques, and History</td>
<td>9</td>
<td>8%</td>
</tr>
<tr>
<td>II. Basic Principles</td>
<td>14</td>
<td>11%</td>
</tr>
<tr>
<td>III. Physical Sciences</td>
<td>22</td>
<td>18%</td>
</tr>
<tr>
<td>IV. Life Sciences</td>
<td>18</td>
<td>15%</td>
</tr>
<tr>
<td>V. Earth/Space Sciences</td>
<td>18</td>
<td>15%</td>
</tr>
<tr>
<td>VI. Science, Technology, and Society</td>
<td>9</td>
<td>8%</td>
</tr>
<tr>
<td>VII. Short-Answer Essays (constructed response)</td>
<td>3</td>
<td>25%</td>
</tr>
<tr>
<td>A. Physical Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Life Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Earth/Space Sciences</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pacing and Special Tips

In allocating time on this assessment, it is expected that about 90 minutes will be spent on the multiple-choice section and about 30 minutes will be spent on the constructed-response section; the sections are not independently timed.

About This Test

The Middle School Science test is designed to measure the knowledge and competencies necessary for a beginning teacher of middle school science. Examinees have typically completed or nearly completed a bachelor's degree program with appropriate coursework in science and education. This test may contain some questions that will not count toward your score.

The development of the test questions and the construction of the test reflect the National Science Education Standards (NSES) and the National Science Teacher Association (NSTA) standards and recognize that there are conceptual and procedural schemes that unify the various scientific disciplines. These fundamental concepts...
and processes (systems; models; constancy and change; equilibrium; form and function) are useful in understanding the natural world. Insofar as possible, then, the test questions will have the primary objective of evaluating the content areas by using questions that focus on conceptual understanding, critical thinking, and problem solving in science. The test content is developed and reviewed in collaboration with practicing middle school science teachers, teacher-educators, and higher education content specialists to keep the test updated and representative of current standards.

The 90 multiple-choice questions include concepts, terms, phenomena, methods, applications, data analysis, and problem solving in science, and include an understanding of the impact of science and technology on the environment and human affairs. This also includes the ability to integrate basic topics from chemistry, physics, life science, and Earth and space science, which are typically covered in introductory college-level courses in these disciplines, although some questions of a more advanced nature are included, because secondary school teachers must understand the subject matter from a more advanced viewpoint than that presented to their students.

Examinees will not need to use calculators in taking this test. The test book contains a periodic table of the elements and a table of information that presents various physical constants and a few conversion factors among SI units. Whenever necessary, additional values of physical constants are printed with the text of a question.

### Topics Covered

Representative descriptions of topics covered in each category are provided below.

#### I. Scientific Methodology, Techniques, and History

**A. Methods of scientific inquiry and how they are used in basic problem solving**

1. Observations, hypotheses, experiments, conclusions, theories, models, and laws
2. Experimental design, including independent and dependent variables, controls, and sources of error
3. Nature of scientific knowledge
   a. subject to change, consistent with evidence, based on reproducible evidence
   b. includes unifying concepts and processes (e.g., systems, models, constancy and change, equilibrium, form and function)

**B. Processes involved in scientific data collection and manipulation**

1. Common units of measurement, including prefixes such as milli and kilo (e.g., units of length, time, mass, volume, pressure, energy, force)
2. Scientific notation and significant figures
3. Organization and presentation of data (e.g., graphs, tables, charts)
4. Basic error analysis (e.g., accuracy, precision)
5. Basic descriptive statistics (e.g., calculate averages, distinguish between mean, mode, and median)

**C. Interpret and draw conclusions from data presented in tables, graphs, and charts**

1. Trends in data
2. Relationships between variables
3. Predictions based on data
4. Drawing conclusions based on evidence
D. Procedures for safe and correct preparation, storage, use, and disposal of laboratory materials
1. Safe storage
2. Proper and safe disposal (e.g., chemicals, biohazards)
3. Proper preparation
4. Use of equipment such as fume hoods

E. Safety and emergency procedures in the laboratory
1. Equipment (e.g., eyewash stations, safety showers)
2. Appropriate student apparel and behavior (e.g., goggles, clothing)
3. Emergency procedures for minor burns and other injuries
4. Emergency procedures for mishaps (e.g., fires, chemical spills)
5. Evacuation procedures

F. How to use standard equipment in the laboratory
1. Appropriate use of equipment (e.g., thermometers, microscopes, barometers, graduated cylinders, Bunsen burners, balances, pH meters)
2. Basic care, preparation, and maintenance of equipment

G. Historical developments of science and the contributions of major historical figures
1. How major concepts developed over time (e.g., atomic models, genetics, plate tectonics)
2. Key historical figures and their contributions

II. Basic Principles

A. Structure and properties of matter
1. Solids, liquids, gases, and plasmas
2. Elements, atoms, compounds, molecules, and mixtures
3. Occurrence and abundance of the elements and their isotopes

B. Basic relationships between energy and matter
1. Conservation of energy (first law of thermodynamics)
2. Entropy changes (second law of thermodynamics)
3. Conservation of matter in chemical systems
4. Forms of kinetic and potential energy (thermal, chemical, radiant, mechanical)
5. Energy transformations
6. Chemical and physical properties/changes
7. Temperature scales (e.g., Celsius, Fahrenheit, and Kelvin; comparisons and conversions between the scales)
8. Effect of thermal energy on matter and the measurement of thermal energy (e.g., specific heat capacity, joules)
9. Methods of heat transfer (e.g., convection, radiation, conduction)
10. Interdisciplinary applications of energy and matter relationships
   a. trophic levels
   b. matter cycling and energy flow in ecosystems
   c. convection currents in atmosphere, ocean, and mantle
   d. conservation of mass in the rock cycle
   e. nitrogen cycle
   f. chemical and physical changes in rocks
   g. impact of solar radiation on Earth and life
   h. photosynthesis and cellular respiration
   i. energy transformations in living systems

C. Basic structure of the atom
1. Atomic models
2. Atomic structure including electrons, protons, and neutrons
3. Atomic number and mass
4. Ions
5. Electron arrangements
6. Radioisotopes, radioactive decay, half-life, fusion, and fission
7. Applications of radioactivity (e.g., carbon dating, evidence for evolution, medical imaging)
III. Physical Sciences

Physics

A. Mechanics
1. Describe linear and circular motion in one and two dimensions
   a. speed
   b. velocity
   c. acceleration
   d. momentum
2. Newton’s first law: inertia
3. Friction
4. Work, energy, and power
5. Mass, weight, and gravity
   a. characteristics of gravitation (e.g., gravitational attraction, acceleration due to gravity, mass, distance)
   b. distinguish between mass and weight
6. Analyze motion and forces in a physical situation, including basic problems
   a. Newton’s second law: F = ma
   b. Newton’s third law: action-reaction forces
   c. inclined planes
   d. collisions
   e. projectile motion
   f. periodic motion (e.g., pendulums, springs, planetary orbits)
   g. conservation of energy and conservation of momentum
7. Simple machines and mechanical advantage
8. Physical properties of fluids (e.g., buoyancy, density, pressure)

B. Electricity and magnetism
1. Electrical nature of materials
   a. electric charges
   b. electrostatic attraction and repulsion
   c. conductivity, conductors, and insulators
2. Analyze basic series and parallel electrical circuits
   a. DC and AC current
   b. current, resistance, voltage, and power
   c. Ohm’s law
   d. voltage sources (e.g., batteries, generators)
3. Magnetic fields and forces
   a. magnetic materials
   b. magnetic forces and fields (e.g., magnetic poles, attractive and repulsive forces)
   c. electromagnets

C. Basic waves and optics
1. Characteristics of light and the electromagnetic spectrum
   a. nature of light
   b. visible spectrum and color
   c. ultraviolet, infrared, microwave, and gamma
2. Basic characteristics and types of waves
   a. transverse and longitudinal
   b. frequency, amplitude, wavelength, speed, intensity
3. Basic wave phenomena
   a. reflection, refraction, diffraction, and dispersion
   b. absorption and transmission
   c. interference, scattering, and polarization
   d. doppler effect
4. Basic characteristics and phenomena of sound
   a. pitch/frequency and loudness/intensity
   b. sound-wave production, air vibrations, and resonance (e.g., tuning forks)
5. Basic optics
   a. mirrors
   b. lenses and their applications (e.g., the human eye, microscope, telescope)
   c. prisms
   d. fiber optics
Chemistry

A. How to use the periodic table to predict the physical and chemical properties of elements
1. Organization of the periodic table
   a. arranged in columns and rows (e.g., groups/families, periods)
   b. includes symbol, atomic number, and atomic mass for each element
2. General trends in chemical reactivity based on position of elements in the periodic table (e.g., metallic and nonmetallic elements, noble gases)
3. General trends in physical properties based on position of elements in the periodic table (e.g., atomic radius, ionization energy)

B. Types of chemical bonding and the composition of simple chemical compounds
1. Covalent and ionic bonding
2. Intermolecular attractions such as hydrogen bonding
3. Names of simple chemical compounds
   a. ionic
   b. covalent compounds involving two elements
   c. acids and bases
4. Interpret chemical formulas
   a. describe formulas in terms of moles of atoms
   b. percent composition
   c. empirical/molecular formulas
   d. electron dot and structural formulas

C. States of matter and phase changes between them
1. Basic assumptions of the kinetic molecular theory of matter (e.g., particles in constant motion, speed and energy of gas particles are related to temperature)
2. Ideal gas laws (e.g., Charles’ law: volume is proportional to temperature; Boyle’s law: pressure and volume are inversely proportional)

3. Phase changes
   a. melting/freezing
   b. vaporization/condensation
   c. sublimation
   d. heating/cooling curves

D. How to balance and use simple chemical equations
1. Balance simple chemical reactions
2. Simple stoichiometric calculations involving balanced equations
3. Use chemical formulas to identify and describe simple chemical reaction equations
   a. combustion
   b. oxidation (e.g., iron rusting)
   c. neutralization
   d. single or double replacement
4. Energy relationships (e.g., endothermic reactions, exothermic reactions)
5. Factors that affect reaction rates (e.g., concentration, temperature, pressure, catalysts/ enzymes)

E. Basic concepts in acid-base chemistry
1. Chemical and physical properties of acids and bases
2. pH scale
3. Neutralization
4. Buffers

F. Solutions and solubility
1. Solution terminology and identification of different types of solutions
   a. dilute and concentrated
   b. saturated, unsaturated, and supersaturated
   c. solvent and solute
   d. concentrations of solutions in terms of molarity
2. Factors affecting the dissolving process and solubility of substances
   a. effect of temperature and particle size on dissolving
   b. effect of temperature on solubility
   c. polar versus nonpolar solvents and solutes (e.g., like dissolves like)
   d. ionic compounds dissociate into ions in solution (e.g., electrolytes)
Step 4: Learn About Your Test

IV. Life Sciences

A. Basic structure and function of cells and their organelles
1. Structure and function of cell membranes (e.g., passive and active transport, osmosis)
2. Structure and function of cell organelles
3. Levels of organization (cells, tissues, organs, organ systems)
4. Major cell types (e.g., muscle, nerve, epithelial)
5. Prokaryotes and eukaryotes

B. Basic cell reproduction
1. Cell cycle
2. Mitosis
3. Meiosis
4. Cytokinesis

C. Basic biochemistry of life
1. Cellular respiration
2. Photosynthesis
3. Biological molecules (e.g., DNA, carbohydrates, proteins, lipids, enzymes)

D. Basic genetics
1. DNA structure
2. Replication, transcription, and translation
3. Dominant and recessive alleles
4. Mendelian inheritance (e.g., genotype, phenotype, use of Punnett squares)
5. Mutations, chromosomal abnormalities, and common human genetic disorders

E. Theory and key mechanisms of evolution
1. Mechanisms of evolution (e.g., natural selection, punctuated equilibrium)
2. Isolation mechanisms and speciation
3. Supporting evidence (e.g., fossil record, comparative genetics, homologous structures)

F. Hierarchical classification scheme and the characteristics of the major groups of organisms
1. Classification schemes (e.g., domain, kingdom, phylum/division, class, order, family, genus, species)
2. Characteristics of animals, plants, fungi, protists, and monera

G. Major structures and functions of plant organs and systems
1. Characteristics of vascular and nonvascular plants
2. Control mechanisms and responses to stimuli
3. Structure and function of leaves, roots, and stems
4. Asexual and sexual reproduction
5. Uptake and transport of nutrients and water
6. Growth

H. Basic anatomy and physiology of animals, including structure and function of human body systems and the major differences between humans and other animals
1. Homeostasis
2. Exchange with the environment (e.g., respiratory, excretory, digestive systems)
3. Internal transport and exchange (e.g., circulatory system)
4. Movement and support (e.g., skeletal and muscular systems)
5. Reproduction and development
6. Immune systems
7. Control systems (e.g., nervous system, endocrine system)
8. Response to stimuli and other organismal behavior

I. Key aspects of ecology
1. Population dynamics (e.g., growth curves; carrying capacity; behavior such as territoriality, mating systems, and social systems)
2. Community ecology (e.g., niche, succession, species diversity, interspecific relationships such as predator-prey and parasitism)
3. Ecosystems
   a. biomes
   b. stability and disturbances (e.g., glaciation, effect of global warming)
   c. energy flow (e.g., trophic levels, food webs)
   d. biogeochemical cycles (e.g., water, nitrogen, and carbon cycles, biotic/abiotic interaction)
Step 4: Learn About Your Test

V. Earth/Space Sciences

Physical Geology

A. Types and characteristics of rocks, minerals, and their formation processes
   1. Characteristics of rocks and their formation processes (e.g., igneous, metamorphic, and sedimentary rocks; the rock cycle)
   2. Characteristics of minerals and their formation processes (e.g., classes of minerals, crystals, hardness)

B. Processes involved in erosion, weathering, and deposition of Earth's surface materials and soil formation
   1. Erosion and deposition (e.g., agents of erosion)
   2. Chemical and physical (mechanical) weathering
   3. Characteristics of soils (e.g., types, soil profile)
   4. Porosity and permeability
   5. Runoff and infiltration

C. Earth's basic structure and internal processes
   1. Earth's layers (e.g., lithosphere, mantle, core)
   2. Earth's shape and size
   3. Geographical features (e.g., mountains, plateaus, mid-ocean ridges)
   4. Earth's magnetic field
   5. Plate tectonics theory and evidence
      a. folding and faulting
      b. continental drift
      c. magnetic reversals
      d. characteristics of volcanoes (e.g., types, lava, eruptions)
      e. characteristics of earthquakes (e.g., epicenters, faults, tsunamis)
      f. seismic waves and triangulation

D. Water cycle
   1. Evaporation
   2. Condensation
   3. Precipitation
   4. Runoff

Historical Geology

A. Historical geology
   1. Principle of uniformitarianism
   2. Basic principles of stratigraphy (e.g., law of superposition)
   3. Relative and absolute time (e.g., index fossils, radioactive dating)
   4. Geologic time scale (e.g., eras, periods)
   5. Fossil formation and the fossil record
   6. Important events in Earth's geologic history (e.g., mass extinctions, Cambrian explosion, ice ages, meteor impacts)

Earth's Hydrosphere and Atmosphere

A. Structure and processes of Earth's oceans and other bodies of water
   1. Geographic location of Earth's oceans and seas
   2. Tides, waves, and currents
   3. Estuaries and barrier islands
   4. Island, reef, and atoll formation
   5. Polar ice caps, icebergs, and glaciers
   6. Lakes, ponds, streams, rivers, and river deltas
   7. Groundwater, water table, wells, and aquifers
   8. Properties of water that affect Earth systems (e.g., density changes upon freezing, high heat capacity, polar solvent, hydrogen bonding)

B. Basic meteorology
   1. Structure of Earth's atmosphere (e.g., troposphere, stratosphere)
   2. Composition of Earth's atmosphere (e.g., percent composition of oxygen and nitrogen)
   3. Atmospheric pressure and temperature
   4. Wind
   5. Cloud types and cloud formation
   6. Frontal systems, weather maps, storms, and severe weather
   7. Humidity, dew point, and frost point
   8. Forms of precipitation
Step 4: Learn About Your Test

C. **Major factors that affect climate and seasons**
   1. Climate zones (e.g., Tropics, Arctic)
   2. Proximity to mountains and oceans
   3. Global winds and ocean circulation
   4. Latitude, geographical location, and elevation
   5. Natural phenomena (e.g., volcanic eruptions)
   6. Human activity
   7. Effect of tilt of Earth’s axis on seasons

**Astronomy**

A. **Major features of the solar system**
   1. Structure of the solar system
   2. Characteristics of planets (e.g., composition, unique features)
   3. Characteristics of the Sun
   4. Asteroids and comets
   5. Theories of origin of the solar system

B. **Interactions of the Earth-Moon-Sun system**
   1. Earth’s rotation and orbital revolution around the Sun
   2. Effect on seasons
   3. Phases of the Moon
   4. Effect on tides
   5. Eclipses

C. **Major features of the universe and theories of its origins**
   1. Galaxies
   2. Stars and their life cycle (e.g., types, nebulae, black holes)
   3. Units of celestial distance (e.g., light-year, astronomical unit)
   4. Theories of origin (e.g., Big Bang)

D. **Contributions of space missions, exploration, and technology**
   1. Remote-sensing devices (e.g., telescopes, satellites, space probes)
   2. Search for life and water on other planets

VI. **Science, Technology, and Society**

A. **Impact of science and technology on the environment and society**
   1. Air and water pollution
   2. Greenhouse gases
   3. Global climate and sea level change
   4. Waste disposal
   5. Acid rain
   6. Loss of biodiversity
   7. Ozone depletion

B. **Major issues associated with energy production and the management of natural resources**
   1. Conservation and recycling
   2. Renewable and nonrenewable energy resources
   3. Pros and cons of power generation based on various sources (e.g., fossil, nuclear, water, wind, solar, biomass, geothermal)
   4. Use and extraction of Earth’s resources (e.g., mining, reclamation, deforestation)

C. **Applications of science and technology in daily life**
   1. Chemical properties of household products
   2. Batteries, wireless devices, microchips, lasers, and fiber optics
   3. Communication satellites
   4. Contributions of space technology
   5. Common agricultural practices (e.g., genetically modified crops, use of herbicides and insecticides)
   6. DNA evidence in criminal investigations

D. **Impact of science on public-health issues**
   1. Nutrition, disease, and medicine (e.g., food preservation, vitamins, vaccines, viruses)
   2. Biotechnology (e.g., genetic engineering, *in vitro* fertilization)
   3. Medical technologies (e.g., MRIs, X-rays, radiation therapy)
VII. Short-Answer Essays

This part of the test contains three equally-weighted constructed-response questions. In each edition of the test, one question will deal with a topic in each of the following content areas: Physical Sciences, Life Sciences, and Earth and Space Sciences. The topics in these content areas can be found in the description of the multiple-choice section of the test. In addition, the questions will assess each of the following skills:

A. Concepts and Models; Systems: Patterns and Processes (1 question)

This question assesses one or more of the following skills:

1. Formulate scientific concepts correctly and identify and correct improperly formulated concepts
2. Use models (defined as ideas or constructs created as tentative descriptions of structures or processes in nature) to communicate concepts and to explain natural phenomena
3. Analyze relationships among the interacting parts of a natural system
4. Identify and explain the processes that follow patterns and cycles in natural systems

B. Data Analysis, Experimental Design, and Investigations (1 question)

This question assesses one or more of the following skills:

1. Analyze and interpret data obtained from an experiment or investigation, including graphical data
2. Design an experiment or investigation that tests a simple hypothesis
3. Describe a laboratory or field demonstration that would illustrate a fundamental scientific concept

C. Science, Technology, and Society (1 question)

This question assesses one or more of the following skills:

1. Understands the impact of science and technology on the environment and society
2. Knows major issues associated with energy production and the management of natural resources
3. Is familiar with applications of science and technology in daily life
4. Is familiar with the impact of science on public-health issues
5. Determine Your Strategy for Success

Set clear goals and deadlines so your test preparation is focused and efficient

Effective Praxis test preparation doesn’t just happen. You’ll want to set clear goals and deadlines for yourself along the way. Otherwise, you may not feel ready and confident on test day. A helpful resource is the Strategies for Success video, which includes tips for preparing and studying, along with tips for reducing test anxiety.

1) Learn what the test covers.

You may have heard that there are several different versions of the same test. It’s true. You may take one version of the test and your friend may take a different version a few months later. Each test has different questions covering the same subject area, but both versions of the test measure the same skills and content knowledge.

You’ll find specific information on the test you’re taking in “4. Learn About Your Test” on page 11, which outlines the content categories that the test measures and what percentage of the test covers each topic. Visit www.ets.org/praxis/testprep for information on other Praxis tests.

2) Assess how well you know the content.

Research shows that test takers tend to overestimate their preparedness—this is why some test takers assume they did well and then find out they did not pass.

The Praxis tests are demanding enough to require serious review of likely content, and the longer you’ve been away from the content, the more preparation you will most likely need. If it has been longer than a few months since you’ve studied your content area, make a concerted effort to prepare.

3) Collect study materials.

Gathering and organizing your materials for review are critical steps in preparing for the Praxis tests. Consider the following reference sources as you plan your study:

- Did you take a course in which the content area was covered? If yes, do you still have your books or your notes?
- Does your college library have a good introductory college-level textbook in this area?
- Does your local library have a high school-level textbook?

Study guides are available for purchase for many Praxis tests at www.ets.org/praxis/testprep. Each guide provides a combination of test preparation and practice, including sample questions and answers with explanations.

4) Plan and organize your time.

You can begin to plan and organize your time while you are still collecting materials. Allow yourself plenty of review time to avoid cramming new material at the end. Here are a few tips:

- Choose a test date far enough in the future to leave you plenty of preparation time at www.ets.org/praxis/register/centers_dates.
- Work backward from that date to figure out how much time you will need for review.
- Set a realistic schedule—and stick to it.
5) Practice explaining the key concepts.

Praxis tests with constructed-response questions assess your ability to explain material effectively. As a teacher, you'll need to be able to explain concepts and processes to students in a clear, understandable way. What are the major concepts you will be required to teach? Can you explain them in your own words accurately, completely, and clearly? Practice explaining these concepts to test your ability to effectively explain what you know.

6) Understand how questions will be scored.

Scoring information can be found in “3. Understand Your Scores” on page 9.

7) Develop a study plan.

A study plan provides a road map to prepare for the Praxis tests. It can help you understand what skills and knowledge are covered on the test and where to focus your attention. Use the study plan template on page 25 to organize your efforts.

And most important—get started!

Would a Study Group Work for You?

Using this guide as part of a study group

People who have a lot of studying to do sometimes find it helpful to form a study group with others who are working toward the same goal. Study groups give members opportunities to ask questions and get detailed answers. In a group, some members usually have a better understanding of certain topics, while others in the group may be better at other topics. As members take turns explaining concepts to one another, everyone builds self-confidence.

If the group encounters a question that none of the members can answer well, the group can go to a teacher or other expert and get answers efficiently. Because study groups schedule regular meetings, members study in a more disciplined fashion. They also gain emotional support. The group should be large enough so that multiple people can contribute different kinds of knowledge, but small enough so that it stays focused. Often, three to six members is a good size.

Here are some ways to use this guide as part of a study group:

• Plan the group's study program. Parts of the study plan template, beginning on page 23 can help to structure your group's study program. By filling out the first five columns and sharing the worksheets, everyone will learn more about your group's mix of abilities and about the resources, such as textbooks, that members can share with the group. In the sixth column (“Dates I will study the content”), you can create an overall schedule for your group's study program.

• Plan individual group sessions. At the end of each session, the group should decide what specific topics will be covered at the next meeting and who will present each topic. Use the topic headings and subheadings in the Test at a Glance table on page 11 to select topics, and then select practice questions, beginning on page 29.

• Prepare your presentation for the group. When it’s your to turn present, prepare something that is more than a lecture. Write two or three original questions to pose to the group. Practicing writing actual questions can help you better understand the topics covered on the test as well as the types of questions you will encounter on the test. It will also give other members of the group extra practice at answering questions.
Step 5: Determine Your Strategy for Success

- **Take the practice test together.** The idea of the practice test is to simulate an actual administration of the test, so scheduling a test session with the group will add to the realism and may also help boost everyone’s confidence. Remember, complete the practice test using only the time that will be allotted for that test on your administration day.

- **Learn from the results of the practice test.** Score one another’s answer sheets. For tests that contain constructed-response questions, look at the Sample Test Questions section, which also contain sample responses to those questions and shows how they were scored. Then try to follow the same guidelines that the test scorers use.

- **Be as critical as you can.** You’re not doing your study partner(s) any favors by letting them get away with an answer that does not cover all parts of the question adequately.

- **Be specific.** Write comments that are as detailed as the comments about the sample responses. Indicate where and how your study partner(s) are doing an inadequate job of answering the question. Writing notes in the margins of the answer sheet may also help.

- **Be supportive.** Include comments that point out what your study partner(s) got right.

Then plan one or more study sessions based on aspects of the questions on which group members performed poorly. For example, each group member might be responsible for rewriting one paragraph of a response in which someone else did an inadequate job.

Whether you decide to study alone or with a group, remember that the best way to prepare is to have an organized plan. The plan should set goals based on specific topics and skills that you need to learn, and it should commit you to a realistic set of deadlines for meeting those goals. Then you need to discipline yourself to stick with your plan and accomplish your goals on schedule.
### 6. Develop Your Study Plan

**Develop a personalized study plan and schedule**

Planning your study time is important because it will help ensure that you review all content areas covered on the test. Use the sample study plan below as a guide. It shows a plan for the *Praxis I® Pre-Professional Skills Test: Reading* test. Following that is a study plan template that you can fill out to create your own plan. Use the “Learn about Your Test” and “Topics Covered” information beginning on page 11 to help complete it.

**Use this worksheet to:**
1. Define Content Areas: List the most important content areas for your test as defined in the Topics Covered section.
2. Determine Strengths and Weaknesses: Identify your strengths and weaknesses in each content area.
3. Identify Resources: Identify the books, courses, and other resources you plan to use for each content area.
4. Study: Create and commit to a schedule that provides for regular study periods.

**Praxis Test Name:** *Praxis I® Pre-Professional Skills Test: Reading*

**Praxis Test Code(s):** 0710

**Test Date:** 11/15/12

<table>
<thead>
<tr>
<th>Content covered</th>
<th>Description of content</th>
<th>How well do I know the content? (scale 1–5)</th>
<th>What resources do I have/need for the content?</th>
<th>Where can I find the resources I need?</th>
<th>Dates I will study the content</th>
<th>Date completed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Literal Comprehension</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Ideas</td>
<td>Identify summaries or paraphrases of main idea or primary purpose of reading selection</td>
<td>2</td>
<td>Middle school English text book</td>
<td>College library, middle school teacher</td>
<td>9/15/12</td>
<td>9/15/12</td>
</tr>
<tr>
<td>Supporting Ideas</td>
<td>Identify summaries or paraphrases of supporting ideas and specific details in reading selection</td>
<td>2</td>
<td>Middle school English text book</td>
<td>College library, middle school teacher</td>
<td>9/17/12</td>
<td>9/17/12</td>
</tr>
<tr>
<td>Organization</td>
<td>Identify how reading selection is organized in terms of cause/effect and compare/contrast</td>
<td>3</td>
<td>Middle and high school English text book</td>
<td>College library, middle and high school teachers</td>
<td>9/20/12</td>
<td>9/21/12</td>
</tr>
<tr>
<td>Organization</td>
<td>Identify key transition words/phrases in reading selection and how used</td>
<td>4</td>
<td>Middle and high school English text book</td>
<td>College library, middle and high school teachers</td>
<td>9/25/12</td>
<td>9/26/12</td>
</tr>
<tr>
<td>Vocabulary in Context</td>
<td>Identify meanings of words as used in context of reading selection</td>
<td>3</td>
<td>Middle and high school English text book, dictionary</td>
<td>College library, middle and high school teachers</td>
<td>9/25/12</td>
<td>9/27/12</td>
</tr>
</tbody>
</table>

(continued on next page)
### Step 6: Develop Your Study Plan

<table>
<thead>
<tr>
<th>Content covered</th>
<th>Description of content</th>
<th>How well do I know the content? (scale 1–5)</th>
<th>What resources do I have/need for the content?</th>
<th>Where can I find the resources I need?</th>
<th>Dates I will study the content</th>
<th>Date completed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Critical and Inferential Comprehension</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation</td>
<td>Determine whether evidence strengthens, weakens, or is relevant to arguments in reading selection</td>
<td>5</td>
<td>High school text book, college course notes</td>
<td>College library, course notes, high school teacher, college professor</td>
<td>10/1/12</td>
<td>10/1/12</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Determine role that an idea, reference, or piece of information plays in author's discussion/argument</td>
<td>5</td>
<td>High school text book, college course notes</td>
<td>College library, course notes, high school teacher, college professor</td>
<td>10/1/12</td>
<td>10/1/12</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Determine if information presented is fact or opinion</td>
<td>4</td>
<td>High school text book, college course notes</td>
<td>College library, course notes, high school teacher, college professor</td>
<td>10/1/12</td>
<td>10/1/12</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Identify relationship among ideas presented in reading selection</td>
<td>2</td>
<td>High school text book, college course notes</td>
<td>College library, course notes, high school teacher, college professor</td>
<td>10/1/12</td>
<td>10/1/12</td>
</tr>
<tr>
<td>Inferential Reasoning</td>
<td>Draw inferences/implications from directly stated content of reading selection</td>
<td>3</td>
<td>High school text book, college course notes</td>
<td>College library, course notes, high school teacher, college professor</td>
<td>10/8/12</td>
<td>10/8/12</td>
</tr>
<tr>
<td>Inferential Reasoning</td>
<td>Determine logical assumptions on which argument or conclusion is based</td>
<td>2</td>
<td>High school text book, college course notes</td>
<td>College library, course notes, high school teacher, college professor</td>
<td>10/8/12</td>
<td>10/8/12</td>
</tr>
<tr>
<td>Inferential Reasoning</td>
<td>Determine author's attitude toward materials discussed in reading selection</td>
<td>1</td>
<td>High school text book, college course notes</td>
<td>College library, course notes, high school teacher, college professor</td>
<td>10/15/12</td>
<td>10/17/12</td>
</tr>
<tr>
<td>Generalization</td>
<td>Recognize or predict ideas/situations that are extensions of, or similar to, what has been presented in reading selection</td>
<td>2</td>
<td>High school text book, college course notes</td>
<td>College library, course notes, high school teacher, college professor</td>
<td>10/22/12</td>
<td>10/24/12</td>
</tr>
<tr>
<td>Generalization</td>
<td>Draw conclusions from materials presented in reading selection</td>
<td>3</td>
<td>High school text book, college course notes</td>
<td>College library, course notes, high school teacher, college professor</td>
<td>10/24/12</td>
<td>10/24/12</td>
</tr>
<tr>
<td>Generalization</td>
<td>Apply ideas presented in a reading selection to other situations</td>
<td>3</td>
<td>High school text book, college course notes</td>
<td>College library, course notes, high school teacher, college professor</td>
<td>10/27/12</td>
<td>10/27/12</td>
</tr>
</tbody>
</table>
# My Study Plan

Use this worksheet to:

1. **Define Content Areas:** List the most important content areas for your test as defined in the Learn about Your Test and Topics Covered sections.
2. **Determine Strengths and Weaknesses:** Identify your strengths and weaknesses in each content area.
3. **Identify Resources:** Identify the books, courses, and other resources you plan to use for each content area.
4. **Study:** Create and commit to a schedule that provides for regular study periods.

<table>
<thead>
<tr>
<th>Content covered</th>
<th>Description of content</th>
<th>How well do I know the content? (scale 1–5)</th>
<th>What resources do I have/need for the content?</th>
<th>Where can I find the resources I need?</th>
<th>Dates I will study the content</th>
<th>Date completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(continued on next page)
### Step 6: Develop Your Study Plan

<table>
<thead>
<tr>
<th>Content covered</th>
<th>Description of content</th>
<th>How well do I know the content? (scale 1–5)</th>
<th>What resources do I have/need for the content?</th>
<th>Where can I find the resources I need?</th>
<th>Dates I will study the content</th>
<th>Date completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7. Review Smart Tips for Success

Follow test-taking tips developed by experts

Learn from the experts. Take advantage of the following answers to questions you may have and practical tips to help you navigate the Praxis test and make the best use of your time.

Should I Guess?
Yes. Your score is based on the number of questions you answer correctly, with no penalty or subtraction for an incorrect answer. When you don’t know the answer to a question, try to eliminate any obviously wrong answers and then guess at the correct one. Try to pace yourself so that you have enough time to carefully consider every question.

Can I answer the questions in any order?
Yes. You can go through the questions from beginning to end, as many test takers do, or you can create your own path. Perhaps you will want to answer questions in your strongest area of knowledge first and then move from your strengths to your weaker areas. On computer-delivered tests, you can use the “Skip” function to skip a question and come back to it later. There is no right or wrong way. Use the approach that works best for you.

Are there trick questions on the test?
No. There are no hidden meanings or trick wording. All of the questions on the test ask about subject matter knowledge in a straightforward manner.

Are there answer patterns on the test?
No. You might have heard this myth: the answers on multiple-choice tests follow patterns. Another myth is that there will never be more than two questions with the same lettered answer following each other. Neither myth is true. Select the answer you think is correct based on your knowledge of the subject.

Can I write in the test booklet or, for a computer-delivered test, on the scratch paper I am given?
Yes. You can work out problems right on the pages of the booklet or scratch paper, make notes to yourself, mark questions you want to review later or write anything at all. Your test booklet or scratch paper will be destroyed after you are finished with it, so use it in any way that is helpful to you. But make sure to mark your answers on the answer sheet or enter them on the computer.

Smart Tips for Taking the Test

1. For a paper-delivered test, put your answers in the right bubbles. It seems obvious, but be sure that you fill in the answer bubble that corresponds to the question you are answering. A significant number of test takers fill in a bubble without checking to see that the number matches the question they are answering.

2. Skip the questions you find extremely difficult. Rather than trying to answer these on your first pass through the test, leave them blank and mark them in your test booklet. Pay attention to the time as you answer the rest of the questions on the test, and try to finish with 10 or 15 minutes remaining so that you
can go back over the questions you left blank. Even if you don’t know the answer the second time you read the questions, see if you can narrow down the possible answers, and then guess.

3. **Keep track of the time.** Bring a watch to the test, just in case the clock in the test room is difficult for you to see. Keep the watch as simple as possible—alarms and other functions may distract others or may violate test security. If the test center supervisor suspects there could be an issue with your watch, they will ask you to remove it, so simpler is better! You will probably have plenty of time to answer all of the questions, but if you find yourself becoming bogged down in one section, you might decide to move on and come back to that section later.

4. **Read all of the possible answers before selecting one.** Then reread the question to be sure the answer you have selected really answers the question. Remember, a question that contains a phrase such as “Which of the following does NOT …” is asking for the one answer that is NOT a correct statement or conclusion.

5. **Check your answers.** If you have extra time left over at the end of the test, look over each question and make sure that you have answered it as you intended. Many test takers make careless mistakes that they could have corrected if they had checked their answers.

6. **Don’t worry about your score when you are taking the test.** No one is expected to answer all of the questions correctly. Your score on this test is not analogous to your score on the GRE® or other similar-looking (but in fact very different) tests. It doesn’t matter on the Praxis tests whether you score very high or barely pass. If you meet the minimum passing scores for your state and you meet the state’s other requirements for obtaining a teaching license, you will receive a license. In other words, what matters is meeting the minimum passing score. You can find passing scores for all states that use The Praxis Series tests at [http://www.ets.org/s/praxis/pdf/passing_scores.pdf](http://www.ets.org/s/praxis/pdf/passing_scores.pdf) or on the Web site of the state for which you are seeking certification/licensure.

7. **Use your energy to take the test, not to get angry at it.** Getting angry at the test only increases stress and decreases the likelihood that you will do your best. Highly qualified educators and test development professionals, all with backgrounds in teaching, worked diligently to make the test a fair and valid measure of your knowledge and skills. Your state painstakingly reviewed the test before adopting it as a licensure requirement. The best thing to do is concentrate on answering the questions.
8. Practice with Sample Test Questions

Answer practice questions and find explanations for correct answers

Sample Test Questions

The sample questions that follow illustrate the types of questions in the test. They are not, however, representative of the entire scope of the test in either content or difficulty. Answers with explanations follow the questions.

Directions: Each of the questions or incomplete statements below is followed by four suggested answers or completions. Select the one that is best in each case.

1. According to some scientists, Earth’s average surface temperature is rising as a result of the greenhouse effect. An increase in the atmospheric concentration of which of the following gases is considered to be primarily responsible?
   (A) Nitrogen
   (B) Oxygen
   (C) Sulfur dioxide
   (D) Carbon dioxide

2. Finding that a solution conducts an electric current shows conclusively that the solution
   (A) has a high boiling point
   (B) contains molecules
   (C) is a good oxidizing agent
   (D) contains ions

3. I. Boron atom, atomic number 5, atomic mass 13
   II. Carbon atom, atomic number 6, atomic mass 11
   III. Carbon atom, atomic number 6, atomic mass 12
   IV. Nitrogen atom, atomic number 7, atomic mass 13
   Consider the atoms described above. Which of the following are isotopes of each other?
   (A) I and IV only
   (B) II and III only
   (C) II and IV only
   (D) III and IV only

4. Some substances have no noticeable odor because these substances
   (A) are soluble in water
   (B) cannot lose the heat that must be lost before an odor can be detected
   (C) have relatively few molecules escaping into the air
   (D) do not have molecules with one of the two molecular arrangements required to give an odor

5. Several vehicles, initially at a complete stop, begin a long race at the same starting point. The vehicle that has a constant value for which of the following is most likely to win?
   (A) Linear speed
   (B) Linear velocity
   (C) Linear acceleration
   (D) Momentum
6. Which of the following statements is true of hurricanes but not of tornadoes?
   (A) They form only over warm oceans.
   (B) They have very high winds.
   (C) They may cause great property damage.
   (D) They may cause human fatalities.

7. The agent most widely and most consistently at work changing the appearance of Earth’s surface is
   (A) fire
   (B) volcanism
   (C) water
   (D) wind

8. A gelatinous sample of material from a previously unexplored marine environment is thought to be living or to be composed of recently living material. Which of the following would most clearly confirm that the material has a biological origin?
   (A) The presence of cells in the sample
   (B) The presence of hydrogen in the sample
   (C) Diffusion of material out of the sample
   (D) Movement of the sample

9. Which of the following is most directly involved with controlling levels of sugar in blood?
   (A) Hemoglobin
   (B) Calcitonin
   (C) Thyroid-stimulating hormone
   (D) Insulin

10. In which of the following is the battery short-circuited?

    = – battery – resistance – bulb

    (A) 
    (B) 
    (C) 
    (D) 

11. A piece of paper that appears blue in sunlight is illuminated solely by a red light that is passed through a green filter. What color does the paper appear under this illumination?
   (A) Blue
   (B) Green
   (C) Red
   (D) Black

12. What quantity of oxygen, O₂, contains very nearly the same number of molecules as 36.0 grams of water, H₂O?
   (A) 64.0 grams
   (B) 32.0 grams
   (C) 16.0 grams
   (D) 8.0 grams
In an experiment to study the effect of a new fertilizer on the growth of tall hybrid corn and dwarf hybrid corn, from immediately after germination to ten days of growth, the data below were obtained. Other growing conditions, such as water and sunlight, were the same for both groups.

13. Which of the following is the most reasonable conclusion that can be drawn from the data above?
   (A) The new fertilizer influences the growth of both corn varieties tested.
   (B) The new fertilizer causes faster growth rates for both varieties than do other fertilizers.
   (C) The new fertilizer improves the root system of the tall hybrid to a greater extent than it does that of the dwarf hybrid.
   (D) The new fertilizer is effective in producing faster growth for both varieties for the first ten days only.

14. Earth’s seasons can be attributed primarily to which of the following in conjunction with its revolution about the Sun?
   (A) The tilt of Earth’s axis of rotation relative to the ecliptic
   (B) The varying amount of sunspot activity
   (C) Earth’s orbit about the Sun as an ellipse rather than a circle
   (D) The rotation of Earth during a 24-hour day

15. Of the following, which atom has the smallest atomic radius?
   (A) S
   (B) Al
   (C) Na
   (D) Ba

16. Animals in which of the following groups may have a backbone and a spinal cord?
   (A) Mollusks
   (B) Chordates
   (C) Invertebrates
   (D) Echinoderms

17. Which of the following parts of the Sun is easily visible only during a total solar eclipse?
   (A) Core
   (B) Photosphere
   (C) Sunspots
   (D) Corona

18. The true length of a block of wood is 1.010 cm. Three measurements of this block produced the following values: 1.4 cm, 1.2 cm, and 0.9 cm. Which of the following statements is true concerning these measurements?
   (A) They are precise and accurate.
   (B) They are precise but not accurate.
   (C) They are accurate but not precise.
   (D) They are neither precise nor accurate.
Answers to Sample Questions

1. The correct answer is (D). Although there are additional gases, such as methane and water vapor, that are considered to be greenhouse gases, carbon dioxide accounts for the largest percentage of the annual human-caused input of these gases.

2. The correct answer is (D). Substances whose water solutions conduct an electric current are called electrolytes. Electrolytes, when in solution, break down into smaller particles called ions.

3. The correct answer is (B). Isotopes are atoms of the same element that have different atomic masses. In order to be the same element, they must have the same number of protons. Therefore, they must possess different numbers of neutrons if they are isotopes.

4. The correct answer is (C). In order for us to smell a particular substance, it must enter the nasal cavity via the air. In addition, it must be sufficiently soluble in water to dissolve in the fluid coating of the cells lining the nasal cavity.

5. The correct answer is (C). The car that has a constant value for linear acceleration would constantly increase its speed over time. Therefore, a car that constantly accelerated would cover a given distance in the shortest time and most likely win a race against cars with constant values for the other parameters listed.

6. The correct answer is (A). The other options are true of both tornadoes and hurricanes. However, hurricanes require warm ocean surface waters in order to develop, and it is from these warm waters and the release of latent heat that they derive their energy. Tornadoes are associated with thunderstorms, form over land, and are most likely to occur when large differences in temperature and moisture exist between two air masses and the boundary between the air masses is sharp.

7. The correct answer is (C). While the agents given in the other options do influence and change the appearance of Earth’s surface, water is constantly acting upon terrestrial features in the form of precipitation, glaciers, streams, rivers, and oceans. Therefore, it contributes to the chemical and mechanical weathering of the land surface in most parts of the globe.

8. The correct answer is (A). According to the cell theory, the basic biological unit of structure and function is the cell, and cells come from other cells. Although the other options could be found in living material or material of biological origin, they are not unique to it and would not clearly confirm that the sample was biological in nature.

9. The correct answer is (D). In response to rising levels of glucose in the blood, cells in the pancreas secrete the hormone insulin. Circulating insulin lowers blood sugar levels by enhancing the transport of glucose and other simple sugars into body cells, especially muscle cells.

10. The correct answer is (B). In this diagram, the path of the circuit is such that current will be diverted from passing through the resistor and the bulb. When the part of a circuit with the most resistance is bypassed, and all of the current flows through the part with zero (negligible) resistance, a short circuit is said to exist.

11. The correct answer is (D). The green filter absorbs all colors except green, which it passes. Therefore, the red light will be absorbed by the filter, which will pass no light. The paper will not be illuminated, and so it will appear black, regardless of its initial color.

12. The correct answer is (A). 36 grams of water is 2 moles (2 × 18.0 grams). A 2-mole sample of O₂ contains the same number of molecules as does 2 moles of any other substance. A 2-mole sample of O₂ would have a mass of 2 × 32.0 grams = 64.0 grams.

13. The correct answer is (A). Both graphs indicate more rapid growth for the treated samples than for the untreated samples. The other options describe results not tested in the experiments and so not indicated by the data.

14. The correct answer is (A). Seasons are best explained as resulting from Earth’s axial tilt and not from distance variations, sunspot activity, atmospheric transparency, or rotation.

15. The correct answer is (A). S has the smallest atomic radius. The relative atomic radii of the atoms of various elements can be predicted from the position of the element on the periodic table. Going across a row of the periodic table from left to right, the radii get smaller, and going down a column, the radii get larger. The correct order of atomic radii for elements in this question is Ba > Na > Al > S.
16. The correct answer is (B). Most chordates possess a vertebral column (backbone) that surrounds a dorsal nerve cord. Mollusks (e.g., clams and mussels) and echinoderms (e.g., sea stars and sea urchins) are invertebrates that lack a vertebral column and dorsal nerve cord.

17. The correct answer is (D). The Sun’s corona has extremely low density and is visible only during a total solar eclipse.

18. The correct answer is (D). The measurements differ from the true length by 0.39 cm, 0.19 cm, and –0.11 cm. Thus, the measurements are quite different in value from the true value, which means that they are not accurate. The measurements are also quite different in value from one another (not repeatable), which means that they are not precise.
**Constructed-Response Sample Questions and Responses**

This section presents sample questions and constructed-response samples along with the standards used in scoring the responses. When you read these sample responses, keep in mind that they will be less polished than if they had been developed at home, edited, and carefully presented. Examinees do not know what questions will be asked and must decide, on the spot, how to respond. Readers take these circumstances into account when scoring the responses.

Readers will assign scores based on the following scoring guide.

**Scoring Guide**

**Score of 3**

- Demonstrates a thorough understanding of the most significant parts of any stimulus material presented
- Responds appropriately to all parts of the question
- Where required, provides a strong explanation that is well supported by relevant evidence
- Demonstrates a strong knowledge of concepts, theories, facts, procedures or methodologies relevant to the question

**Score of 2**

- Demonstrates basic understanding of the most significant aspects of any stimulus material presented
- Responds appropriately to most aspects of the question
- Where required, provides an explanation that is sufficiently supported by relevant evidence
- Demonstrates a sufficient knowledge of concepts, theories, facts, procedures, or methodologies relevant to the question

**Score of 1**

- Demonstrates misunderstanding of significant aspects of any stimulus material presented
- Fails to respond appropriately to most parts of the question
- Where required, provides a weak explanation that is not well supported by relevant evidence
- Demonstrates a weak knowledge of concepts, theories, facts, procedures, or methodologies relevant to the question

**Score of 0**

- Blank, off-topic, or totally incorrect response; rephrases the question
Sample Question 1
A 4-liter, thin-metal can with its screw-top lid removed contains 100 milliliters of water. It is heated until the water boils. The can is then removed from the heat and its lid firmly replaced. Describe what will happen to the can as it cools and why.

Sample Response That Received a Score of 3
The sides of the can will start to collapse inward until the point of equilibrium is reached between the pressure inside the can, the pressure outside the can, and the strength of the can's walls.

This is caused by the liquid water being heated enough to turn to vapor. This vapor then displaces the air molecules inside. When the can is taken off of the heat source, the vapor then condenses back into liquid, and because the lid was airtight, this creates a lower pressure inside the can than outside, since there are less air molecules in the same space. Thus the can collapses until the pressure inside the can equals that outside.

Sample Question 2
(A) Given five different hand-sized samples of unidentified minerals, discuss how you would determine their order of relative hardness.
(B) Describe, in terms of their relative hardness, how the shapes of these minerals would be affected over time in a fast-moving stream or river.

Sample Response That Received a Score of 3
Geologists determine the hardness of various minerals by using the Mohs hardness scale. Using the scale, you compare the hardness of the minerals you are trying to identify to the ones in the Mohs scale. Talc, for example, is classified as a “1.” If the mineral you are looking at scratches the talc, it has a hardness that is greater than “1” and you would try the next hardest mineral, which is gypsum, and so on, until you found the correct hardness. (Neither mineral would scratch the other one.)

Minerals that have a hardness of 1, such as talc, would be worn down very quickly by a fast-moving stream or river. Softer minerals would therefore be broken down, while harder minerals would be rounded and smoothed. The hardest minerals, such as diamond would not be affected as much over periods of time. It would take a very long time for rough edges to be worn down.

Sample Response That Received a Score of 2
Softer minerals are scratched by harder materials. By conducting scratch tests, you can put the five minerals in order of their hardness. Softer minerals would change shape at a much faster rate in a fast-moving stream or river than harder minerals would. The softer the mineral the more likely it will break into smaller pieces.

Sample Response That Received a Score of 1
You would observe the surface of these rocks and look for fractures and cracks, then you would chip off pieces with a hammer and determine the amount of force it takes to break each one. Softer rocks would break up easily on the bed of a stream, and it would take a relatively short amount of time. Harder rocks would not break but they would be worn smooth by rolling along the bottom between the current and the streambed.
9. Check on Testing Accommodations

See if you qualify for accommodations that may make it easier to take the Praxis test

What if English is not my primary language?

Praxis tests are given only in English. If your primary language is not English (PLNE), you may be eligible for extended testing time. For more details, visit www.ets.org/praxis/register/accommodations/plne.

What if I cannot take the paper-based test on Saturday?

Monday is the alternate paper-delivered test day for test takers who can't test on Saturday due to:

- religious convictions
- duties as a member of the United States armed forces

Online registration is not available for Monday test takers. You must complete a registration form and provide a photocopy of your military orders or a letter from your cleric. You'll find details at www.ets.org/praxis/register/accommodations/monday_testing.

What if I have a disability or other health-related need?

The following accommodations are available for Praxis test takers who meet the Americans with Disabilities Act (ADA) Amendments Act disability requirements:

- Extended testing time
- Additional rest breaks
- Separate testing room
- Writer/recorder of answers
- Test reader
- Sign language interpreter for spoken directions only
- Perkins Brailler
- Braille slate and stylus
- Printed copy of spoken directions
- Oral interpreter
- Audio test
- Braille test
- Large print test book (14 pt.)
- Large print answer sheet
- Listening section omitted

For more information on these accommodations, visit www.ets.org/praxis/register/disabilities.

Note: Test takers who have health-related needs requiring them to bring equipment, beverages, or snacks into the testing room or to take extra or extended breaks must request these accommodations by following the procedures described in the Bulletin Supplement for Test Takers with Disabilities or Health-Related Needs (PDF), which can be found at http://www.ets.org/praxis/register/disabilities.

You can find additional information on available resources for test takers with disabilities or health-related needs at www.ets.org/disabilities.
10. Do Your Best on Test Day

*Get ready for test day so you will be calm and confident*

You followed your study plan. You are prepared for the test. Now it’s time to prepare for test day.

Plan to end your review a day or two before the actual test date so you avoid cramming. Take a dry run to the test center so you’re sure of the route, traffic conditions, and parking. Most of all, you want to eliminate any unexpected factors that could distract you from your ultimate goal—passing the *Praxis* test!

On the day of the test, you should:

- be well rested
- wear comfortable clothes and dress in layers
- eat before you take the test and bring food with you to eat during break to keep your energy level up
- bring an acceptable and valid photo identification with you
- bring a supply of well-sharpened No. 2 pencils (at least 3) and a blue or black pen for the essay or constructed-response questions for a paper-delivered test
- be prepared to stand in line to check in or to wait while other test takers check in
- select a seat away from doors, aisles, and other high-traffic areas

You can't control the testing situation, but you can control yourself. Stay calm. The supervisors are well trained and make every effort to provide uniform testing conditions, but don't let it bother you if the test doesn't start exactly on time. You will have the necessary amount of time once it does start.

You can think of preparing for this test as training for an athletic event. Once you’ve trained, prepared, and rested, give it everything you’ve got.

**What items am I restricted from bringing into the test center?**

You cannot bring into the test center personal items such as:

- handbags, knapsacks, or briefcases
- water bottles or canned or bottled beverages
- study materials, books, or notes
- scrap paper
- any electronic, photographic, recording, or listening devices

**Note:** All cell phones, smart phones (e.g., BlackBerry®, iPhones®, etc.), PDAs, and other electronic, photographic, recording, or listening devices are strictly prohibited from the test center. If you are seen with such a device, you will be dismissed from the test, your test scores will be canceled, and you will forfeit your test fees. If you are seen USING such a device, the device will be confiscated and inspected. For more information on what you can bring to the test center, visit [www.ets.org/praxis/test_day/bring](http://www.ets.org/praxis/test_day/bring).
Step 10: Do Your Best on Test Day

Are You Ready?

Complete this checklist to determine whether you are ready to take your test.

- Do you know the testing requirements for the license or certification you are seeking in the state(s) where you plan to teach?
- Have you followed all of the test registration procedures?
- Do you know the topics that will be covered in each test you plan to take?
- Have you reviewed any textbooks, class notes, and course readings that relate to the topics covered?
- Do you know how long the test will take and the number of questions it contains?
- Have you considered how you will pace your work?
- Are you familiar with the types of questions for your test?
- Are you familiar with the recommended test-taking strategies?
- Have you practiced by working through the practice questions in this study companion or in a study guide or practice test?
- If constructed-response questions are part of your test, do you understand the scoring criteria for these items?
- If you are repeating a Praxis test, have you analyzed your previous score report to determine areas where additional study and test preparation could be useful?

If you answered “yes” to the questions above, your preparation has paid off. Now take the Praxis test, do your best, pass it—and begin your teaching career!
Appendix: Other Questions You May Have

Here is some supplemental information that can give you a better understanding of the Praxis tests.

What do the Praxis tests measure?
The Praxis tests measure the specific knowledge and skills that beginning teachers need. The tests do not measure an individual’s disposition toward teaching or potential for success. The assessments are designed to be comprehensive and inclusive, but are limited to what can be covered in a finite number of questions and question types.

Ranging from Agriculture to World Languages, there are more than 100 Praxis tests, which contain multiple-choice questions or constructed-response questions, or a combination of both.

What is the difference between Praxis multiple-choice and constructed-response tests?
Multiple-choice tests measure a broad range of knowledge across your content area. Constructed-response tests measure your ability to provide in-depth explanations of a few essential topics in a given subject area. Content-specific Praxis pedagogy tests, most of which are constructed-response, measure your understanding of how to teach certain fundamental concepts in a subject area.

The tests do not measure your actual teaching ability, however. Teaching combines many complex skills that are typically measured in other ways, including classroom observation, videotaped practice, or portfolios not included in the Praxis test.

Who takes the tests and why?
Some colleges and universities use the Praxis Core Academic Skills for Educators tests (Reading, Writing and Mathematics) to evaluate individuals for entry into teacher education programs. The assessments are generally taken early in your college career. Many states also require Praxis scores as part of their teacher licensing process.

Individuals entering the teaching profession take the Praxis tests as part of the teacher licensing and certification process required by many states. In addition, some professional associations and organizations require Praxis tests for professional licensing.

Do all states require these tests?
The Praxis Series tests are currently required for teacher licensure in approximately 40 states and United States territories. These tests are also used by several professional licensing agencies and by several hundred colleges and universities. Teacher candidates can test in one state and submit their scores in any other state that requires Praxis testing for licensure. You can find details at www.ets.org/praxis/states.

What is licensure/certification?
Licensure in any area—medicine, law, architecture, accounting, cosmetology—is an assurance to the public that the person holding the license possesses sufficient knowledge and skills to perform important occupational activities safely and effectively. In the case of teacher licensing, a license tells the public that the individual has met predefined competency standards for beginning teaching practice.

Because a license makes such a serious claim about its holder, licensure tests are usually quite demanding. In some fields, licensure tests have more than one part and last for more than one day. Candidates for licensure in all fields plan intensive study as part of their professional preparation. Some join study groups, others study
alone. But preparing to take a licensure test is, in all cases, a professional activity. Because it assesses the entire body of knowledge for the field you are entering, preparing for a licensure exam takes planning, discipline, and sustained effort.

Why does my state require The Praxis Series tests?
Your state chose The Praxis Series tests because they assess the breadth and depth of content—called the “domain”—that your state wants its teachers to possess before they begin to teach. The level of content knowledge, reflected in the passing score, is based on recommendations of panels of teachers and teacher educators in each subject area. The state licensing agency and, in some states, the state legislature ratify the passing scores that have been recommended by panels of teachers.

How are the tests updated to ensure the content remains current?
Praxis tests are reviewed regularly. During the first phase of review, ETS conducts an analysis of relevant state and association standards and of the current test content. State licensure titles and the results of relevant job analyses are also considered. Revised test questions are then produced following the standard test development methodology. National advisory committees may also be convened to review existing test specifications and to evaluate test forms for alignment with the specifications.

How long will it take to receive my scores?
Scores for computer-delivered tests are available faster than scores for paper-delivered tests. Scores for most computer-delivered multiple-choice tests are reported on the screen immediately after the test. Scores for tests that contain constructed-response questions or essays aren’t available immediately after the test because of the scoring process involved. Official scores for computer-delivered tests are reported to you and your designated score recipients approximately two to three weeks after the test date. Scores for paper-delivered tests will be available within four weeks after the test date. See the test dates and deadlines calendar at www.ets.org/praxis/register/centers_dates for exact score reporting dates.

Can I access my scores on the Web?
All test takers can access their test scores via their Praxis account free of charge for one year from the posting date. This online access replaces the mailing of a paper score report. The process is easy—simply log in to your Praxis account at www.ets.org/praxis and click on your score report. If you do not already have a Praxis account, you must create one to view your scores.

Note: You must create a Praxis account to access your scores, even if you registered by mail or phone.
Your teaching career is worth preparing for, so start today!
Let the *Praxis™ Study Companion* guide you.